

FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST-9136

Shonan (USA) Inc.

INTRODUCTION

This fact sheet is a companion document to the Draft State Waste Discharge Permit No. ST-9136. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the Grandview POTW. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities, which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A - Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix C - Response to Comments.

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GENERAL INFORMATION	
Applicant	Shonan (USA), Inc.
Facility Name and Address	Shonan (USA), Inc. PO Box 128 702 Wallace Way Grandview, WA 98930
Type of Facility:	Fruit and Vegetable Juice Processing
Facility Discharge Location	Latitude: 46° 15' 44" N. Longitude: 119° 55' 08" W.
Treatment Plant Receiving Discharge	City of Grandview
Contact at Facility	Robert Brooks
Responsible Official	Plant Superintendent Telephone #: (509) 882-5583

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Industrial Processes

Shonan operates with three shifts (22/16/12 employees) 5 1/2 days a week throughout the year. The facility processes fresh and frozen fruits and vegetables into concentrated juices. In a recent year, 5500 (metric) tons of apple juice concentrate were produced from 19,500 tons of crop, 2500 tons of carrot concentrate from 18,500 tons of crop, and 33 tons of pepper concentrate from 250 tons of bell peppers.

Shonan's discharge consists of two types of wastewater that form a single flow before being sent to the POTW. Process wastes are comprised of fruit washing (50,000 gallons/day), processing (125,000 gallons/day), evaporation (40,000 gallons/day), and blending and packaging (20,000 gallons/day). These flows total 235,000 gallons; however, permitted flow limits are significantly lower because the maximum flows shown above are not generated simultaneously.

EXPIRATION DATE: APRIL 30, 2009

The other type of wastewater consists of boiler wastes and cooling water at a volume of about 39,000 gallons per day. Flow volume of this stream is measured separately. Sanitary wastes comprise about 1000 gallons per day of the total flow to the treatment plant.

The City of Grandview has required installation of flow meters and sampling equipment to monitor the industrial discharges to the POTW. At Shonan, these are located to sample only the process wastestream. In-plant treatment consists of solids removal and pH adjustment.

PERMIT STATUS

The previous (temporary) permit for this facility was issued on January 13, 1996.

An application for permit renewal was submitted to the Department on November 13, 1995 and accepted by the Department on November 27, 1995.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on October 16, 1998.

Commercial/industrial discharges to the Grandview sewer system are regulated by municipal code. Limits have been developed for flow volume, BOD and TSS. User rates are based on these measured parameters and exceedances are subject to a surcharge. The allowable pH range is between 5.0 and 11.0. (A discharge with a pH beyond the range 5.0 to 11.0 for longer than 15 minutes in any one-hour period constitutes a violation of city code).

Results of pH monitoring are reported as incidences of code violations. From January 1997 through October 1997, 198 code violations were reported. Monthly code violations numbers varied from none to 64. Code violations normally are a result of pH below 5.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge for the period September 1995 through December 1998 was reported in the permit application as follows: monthly average – BOD 1700 mg/L, TSS 400mg/L.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants on the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring all available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110).

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the Grandview POTW from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary. These limitations are based on local limits established by the Grandview POTW and codified in ordinance.

Following several years of study and sampling, an Engineering Report was prepared by Huibregtse, Louman Associates, and submitted to the Department in February 1997. In this report, the treatment capacity of the Grandview POTW is evaluated, and this capacity is apportioned among the industrial dischargers (mainly food processors) as well as domestic loading. Waste streams from food processing industries vary widely in flow volume and strength with the type and tonnage of crops being processed. Allowable levels of flow, BOD and TSS are divided among contributors to the POTW on a month to month basis as follows:

Parameter	Jan	Feb	Mar	Apr	May	Jun
Av. Daily Flow (mgd)	0.162	0.193	0.166	0.165	0.169	0.138
BOD (5-day) lb/day	3,440	2,946	2,678	4,720	4,197	3,508
TSS lb/day	511	441	637	782	230	346

Parameter	Jul	Aug	Sep	Oct	Nov	Dec
Av. Daily Flow (mgd)	0.094	0.062	0.118	0.116	0.102	0.077
BOD (5-day) lb/day	6,984	2,890	4,552	2,806	2,804	2,666
TSS lb/day	542	300	375	463	625	287

It is not unlikely that these contracted limits could be renegotiated before this permit expires. A mechanism to establish limits in this state permit to coincide with those in the city contract is needed. Permits limits will be established by reference to an O & M manual Appendix that contains the current contracted limits.

Pollutant concentrations in the proposed discharge with technology-based controls in place should not cause problems at the receiving POTW such as interference, pass-through or hazardous exposure to POTW workers, nor should it result in unacceptable pollutant levels in the POTW's sludge.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Shonan has installed monitoring equipment required by the city. Flow is monitored continuously, and a sensor records pH every 60 seconds. (Being beyond the range 5.0 to 11.0 for longer than 15 minutes in any one-hour period constitutes a violation of city code, and the industrial user is billed accordingly.) A 24-hour composite sampler is used to monitor BOD and TSS at least two days a week.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-216-110 and 40 CFR 403.12 (e), (g), and (h)).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S5. as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances, which cause pass-through or interference, pollutants which may cause damage to the POTW or

harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

In addition, the Department has determined that the Permittee has the potential for a batch discharge that could adversely affect the POTW, therefore a slug discharge control plan is required (40 CFR 403.8 (f)).

The proposed permit requires the Permittee to develop and implement a Spill and Slug Discharge Prevention and Control Plan for preventing and controlling the accidental release of pollutants to the POTW and state waters and for minimizing damages, if such a discharge occurs.

Plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies which meet the intent of this section may be submitted.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1. requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2. requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3. specifies conditions for modifying, suspending or terminating the permit. Condition G4. requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5. requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6. prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7. and G8. relate to permit renewal and transfer. Condition G9. requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10. prohibits the reintroduction of removed pollutants

into the effluent stream for discharge. Condition G11. requires the payment of permit fees. Condition G12. describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

The Department in a local newspaper may annually publish a list of all industrial users, which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for 5 years.

APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations, which are described in the rest of this fact sheet.

Public notice of application was published on December 6, 1995 and December 13, 1995 in the Grandview Herald to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on January 13, 1999 in the Grandview Herald to inform the public that a draft permit and fact sheet were available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, Washington 98902
(509) 575-2490

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (509) 575-2490, or by writing to the address listed above.

This permit was written by C. S. Wallin.

APPENDIX B -- GLOSSARY

All Known, Available, and Reasonable Treatment (AKART)—AKART shall represent the most current methodology that can reasonably required for preventing, controlling, or abating the pollutants associated with a discharge. BMPs are considered a subset of the AKART requirement.

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all

parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be “time-composite”(collected at constant time intervals) or “flow-proportional” (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference—A discharge which, alone or in conjunction with a discharge or discharges from other sources, either: (1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; or (2) therefore is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through—The discharge of pollutants through a municipal sewerage system into waters of the state in quantities or concentrations which are a cause or significantly contribute to a violation of any requirement of water quality standards for waters of the State of Washington, or of the NPDES permit or State waste discharge permit, including an increase in the magnitude or duration of the violation.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--Industrial dischargers to a POTW that have effluent limitations defined in a category (40 CFR 403.6 and 40 CFR Chapter I, subchapter N). However, the control authority may make a determination that even though an industrial user belongs to a category that has effluent limits for pretreatment, that industry is not a significant industrial because there is no reasonable potential for affecting the POTW's operation. A SIU may also be any other industrial user that: 1. discharges an average of 25,000 gallons per day or more of process water, 2. makes up more than 5 percent of the average hydraulic flow (dry weather) or 5 percent of the organic capacity of the plant, or 3. the control authority believes has a reasonable potential to adversely affect the POTW's operation.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C -- RESPONSE TO COMMENTS

No comments were received.